NEVADA DIVISION OF ENVIRONMENTAL PROTECTION

# UNDERGROUND INJECTION PERMIT APPLICATION

**Application Fee must be submitted with application **

☐ New ☐ Renewal ☐ Modification **Application Fee Paid:** _____

**1. Name of Field or Project**:

**2.** Permit Request: ☐ Individual Permit ☐ Area Permit

**3. Facility Name and Address**
Name _____
Street _____
City _____
State/Zip _____
County _____
Phone_____ Fax _____

**4. ☐ Owner ☐ Operator ☐ Both**
Name _____
Street _____
City _____
State/Zip _____
Phone_____ Fax _____
(Include any partnership information on separate page)

**5. Billing Address**
Name _____
Street _____
City _____
State/Zip _____

**6. Official representative** (if other than private)
Name _____
Street _____
City _____
State/Zip _____
Phone_____Fax _____

**7. Injection well ownership status** (Mark with X)
☐ Federal ☐ State ☐ Private ☐ Public ☐ Other (explain)
_____

**Well Site/Field Land Status:** ☐ Private ☐ Public
Name of Land Management Agency:_____
(BLM, Forest Service, etc.)

**8. Number of Constructed Injection well(s)**: _____
Production well(s) in field: _____
Monitoring/Observation well(s): _____ _____
**Number of wells in Area of Review:** _____

**No. of Proposed Injection well(s)**: _____
Production well(s) in field: _____ _____
Monitoring/Observation well(s): _____

**9. Type of Well** (Mark with X)

| | | |
|---|---|---|
| ☐ Produced fluid disposal | ☐ Remediation | ☐ Residential Heating |
| ☐ Enhanced recovery | ☐ Bioremediation | ☐ Stormwater |
| ☐ Hydrocarbon storage | ☐ Mining Dewatering | ☐ Solution mining |
| ☐ Geothermal Power Production | ☐ Commercial Heating | ☐ Other_____ |

**10. List all Sections with Township and Range to be included in Area Permit:** _____
_____

**11. Location of Injection Well/Project**

| Latitude | | | Longitude | | | Township and Range | | | | Location and Property | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Deg | Min | Sec | Deg | Min | Sec | Twsp | Range | Section | ¼ Sec | Ft. From | Line | Ft. From | Line |
| | | | | | | | | | | | | | |

Check ☐ if latitude and longitude to be provided upon completion for each well. For multiple wells, attach separate page with locations.

**12. Attachments** (See instructions)

**Certification by Responsible Party** **(Note: this document must be signed by an official of the responsible party)**

I certify under penalty of law that I have personally examined and am familiar with the information in this and attached documents. I believe the information is true, accurate and complete, based on my inquiry of those individuals immediately responsible for obtaining the information. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

| **Name and Title of Responsible Official** (Type or Print) | **Telephone Number** |
|---|---|
| **Signature of Responsible Official** | **Date** |

NDEP USE ONLY

| Date Received | Identification Number | Fee Received Yes No Amount: |
|---|---|---|
| | | |

## INSTRUCTIONS FOR COMPLETING UNDERGROUND INJECTION PERMIT APPLICATION:

1. **NAME OF FIELD OR PROJECT** - Name of the oil or geothermal field, or the name of the facility for other types of projects, where the injection well(s) will be located.

2. **TYPE OF PERMIT** - Mark "Individual" or "Area" to indicate the type of permit desired. Note that area permits are at the discretion of the Director and that wells covered by an area permit must be at one site, and under the control of that person. If an area permit is requested, the number of wells to be included in the permit must be specified and the wells described and identified by location. If the area has a commonly used name, submit the name in the space provided.

3. **FACILITY NAME and ADDRESS** - Name of well(s), well field or company and address. Enter the Standard Industrial Code number, if known, that best describes the nature of the facility.

4. **OWNER/OPERATOR NAME and ADDRESS** - Name and address of owner or operator of the well. Mark box to indicate whether applicant is owner, operator or both.

5. **BILLING ADDRESS** - Provide the mailing address for all billing-related matters.

6. **OFFICIAL REPRESENTATIVE** - if the ownership of the well is other than private, the applicant shall enter his name, title and address.

7. **OWNERSHIP STATUS** - Mark the appropriate box to indicate the type of injection well ownership. In the right box, please indicate the land status for all sections/areas that will include the injection well(s) and could be affected by surface discharges.

8. **NUMBER OF WELLS** - Indicate all existing and proposed injection well(s). Indicate the number of production wells which could provide fluids to the injection well(s). Indicate the number of observation/monitoring wells within the injection well field/area. Provide all production and monitoring well names with the attachments. List <u>all</u> the wells determine to be within the Area of Review under Parts A and B of the Attachments to the Application.

9. **TYPE OF WELL** - Mark with an "X" the box that best describes the type of injection well for which the permit is requested. Explain if "other".

10. **LIST OF SECTIONS TO BE INCLUDED IN AREA PERMIT** - Provide a list of sections within which the injection wells will be located for an area permit. Applicant may request as many sections as necessary.

11. **LOCATION OF WELL** - Enter the latitude and longitude of the existing or proposed well expressed in degrees, minutes, and seconds and the location by township, range, section and quarter section. Also locate the well within the owner's property boundaries by entering the number of feet from the well to the north or south and the east or west property lines. If an area permit is applied for, attach a list of each well providing the location information.

12. **ATTACHMENTS** - Read the instructions for preparing attachments carefully. Also refer to the regulations (NAC 445A.867). The ability to process your application for a permit depends heavily on the completeness and accuracy of the attachments.

    **CERTIFICATION** - All permit applications must be signed by a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, and by a principal executive or ranking elected official for a public agency. This person will be the responsible party named in any violations noted by the Division.

**INSTRUCTIONS - ATTACHMENTS TO APPLICATION**

Attachments to be submitted with UIC permit application for Class II, III, and V wells, including power producing geothermal, treated water disposal, dewatering, recharge, industrial process water, stormwater, etc. Also refer to NAC 445A.867.

A. **AREA OF REVIEW METHODS** - Give the methods and, if appropriate, the calculations used to determine the size of the area of review (fixed radius or equation). The area of review shall be a fixed radius of 1 mile from the well bore unless the use of an equation is approved in advance by the Director.

B. **MAPS OF WELLS/AREA AND AREA OF REVIEW** - Submit a topographic map, extending at least one mile beyond the property boundaries, showing the injection well(s) or project area for which a permit is sought and the applicable area of review. The map must show all intake and discharge structures and all hazardous waste, treatment, storage, or disposal facilities. If the application is for an area permit, the map should show the distribution manifold (if applicable applying injection fluid to all wells in the area, including all system monitoring points. Within the area of review, the map must show the following:

The number of wells and location of all producing wells, injection wells, abandoned wells, dry holes, surface bodies of water, springs, mines (surface and subsurface), quarries, water wells, public water supply systems, and other pertinent surface features, including residences, roads, faults (if known or suspected), etc.

C. **CORRECTIVE ACTION PLAN AND WELL DATA** - Submit a tabulation of data reasonably available from public records or otherwise known to the applicant on all wells within the area of review, including those in the map required in part B., which penetrates the proposed injection zone. Such data shall include the following:

A description of each well's type, construction, date drilled, location, depth, record of plugging and/or completion, and any additional information the Director may require. For Class II wells operating over the fracture pressure of the injection formation, all known wells within the area of review which penetrate formations affected by the increase in pressure. Include the corrective action proposed to be taken by the applicant under NAC 445A.899.

D. **MAPS AND CROSS SECTIONS OF USDW's** - Submit geologic name and depth to bottom of all underground sources of drinking water which may be affected by the injection. Submit maps and cross sections indicating the vertical limits of all underground sources of drinking water within the area of review, their position relative to the injection formation and the direction of water movement, where known, in every underground source of drinking water which may be affected by the proposed injection. Include depth to groundwater, groundwater flow direction/rate, and hydraulic conductivity.

E. **MAPS AND CROSS SECTIONS OF GEOLOGIC STRUCTURE OF AREA** - Submit maps and cross sections detailing the geologic structure of the local area (including the lithology of injection and confining intervals thickness, depths and fracture pressure) and generalized maps and cross sections illustrating the regional geologic setting.

F. **OPERATING DATA** - Submit the following proposed operating data for each well (including all those to be covered by area permits): (1) average and maximum daily rate and volume of the fluids to be injected; (2) average and maximum injection pressure; (3) nature of annulus fluid, if used; and (4) source and analysis of the physical and chemical characteristics of the injection fluid. The chemical analysis shall be for the primary and secondary drinking water constituents, including the eight major metals, and gross alpha and gross beta unless specified otherwise by UIC staff.

G. **FORMATION TESTING PROGRAM** - For Class II wells the testing program must be designed to obtain data on fluid pressure, estimated fracture pressure, physical and chemical characteristics of the injection zone (does not apply to existing Class II wells or projects.)

For Class III wells the program must be designed to obtain data on fluid pressure, fracture pressure, and physical and chemical characteristics of the formation fluids if the formation is naturally water bearing. Only fracture pressure is required if the formation is not water bearing. (Does not apply to existing Class III Wells or projects.)

H. **STIMULATION PROGRAM** - Outline any proposed stimulation program.

I. **INJECTION PROCEDURES** - Describe the proposed injection procedures including pump, surge, tank, etc.

For Class V wells, obtain data on physical and chemical characteristics of the formation fluids and fluid pressure. For high volume injection wells, data on fracture pressure may be required. A recent sample from the receiving water must be analyzed for both volatile (EPA method 624), inorganic (Profile I), and other relevant organic compounds as needed.

J. **CONSTRUCTION PROCEDURES** - Discuss the injection well construction procedures to be utilized. This should include details of the casing and cementing program, logging procedures, deviation checks, and the drilling, testing and coring programs, and proposed annulus fluid.

K. **CONSTRUCTION DETAILS** - Submit schematic or other appropriate drawings of the surface and subsurface construction details of the well. Also required with all applications is a schematic of the complete surface/subsurface conveyance system, including all process/treatment systems, additive ports, valves and gauges, pumps, etc.

L. **CHANGES IN INJECTED FLUID** - Discuss expected changes in pressure, chemistry, native fluid displacement, and direction of movement of injected fluid.

M. **PLANS FOR WELL FAILURES** - Outline contingency plans (proposed plans, if any, for Class II) to cope with all shut-ins or well failures, so as to prevent migration of fluids into any USDW.

N. **MONITORING PROGRAM** - Discuss the planned monitoring program. This should be thorough, including maps showing the number and location of monitoring wells as appropriate and a discussion of monitoring devices, sampling frequency, and parameters measured. If a manifold monitoring program is utilized, pursuant to CFR §146.23(b)(5), describe the program and compare it to individual well monitoring.

O. **PLUGGING AND ABANDONMENT PLAN** - Submit a plan for plugging and abandonment of the well including: (1) describe the type, number, and placement (including the elevation of the top and bottom) of plugs to be used; (2) describe the type, grade, and quantity of cement to be used; and (3) describe the method to be used to place plugs, including the method used to place the well in a state of static equilibrium prior to placement of the plugs; (4) a cost estimate of materials, equipment and labor for plugging and abandonment of the well. Also for a Class III well that underlies or is in an exempted aquifer, demonstrate adequate protection of USDW's.

P. **FINANCIAL RESPONSIBILITY** - Submit evidence such as a surety bond or financial statement to verify that the resources necessary to plug and abandon the well(s) are available. This includes Class II, III and V injection wells. Copies of bonds filed with BLM or Nevada Department of Minerals may be submitted as evidence.

Q. **AQUIFER EXEMPTIONS** - If an aquifer exemption is requested, submit data necessary to demonstrate that the aquifer meets the following criteria: (1) does not serve as a source of drinking water; and (2) cannot now and will not in the future serve as a source of drinking water; or (3) the TDS content of the ground water is more than 10,000 mg/1 and is not reasonably expected to supply a public water system. Data to demonstrate that the aquifer is expected to be mineral, hydrocarbon or geothermal producing, such as general description of the mining zone, analysis of the amenability of the mining zone to the proposed method, and time table for proposed development must also be included. For addition information on aquifer exemptions, see NAC 445A.851.

R. **DESCRIPTION OF BUSINESS** - Give a brief description of the nature of the business. If the injection activity is used as a remediation effort, provide a brief historical summary of how the site was impacted.

S. **MECHANICAL INTEGRITY** - Results of any mechanical integrity testing, if performed, including description of test, date performed, and name of Division representative witnessing test.